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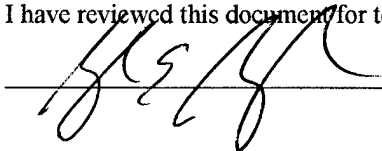
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I have reviewed this document for technical and security purposes and find it acceptable.

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PREFACE

(U) This technical report was prepared by the staff of the Visualization & Simulation Laboratory of the Research Institute, The University of Alabama in Huntsville. It documents the research performed under contract number DAAH01-98-D-R001, delivery Order 0040. Mr. Glenn E. Romanczuk served as the Principal Investigator Ms. Kim Williams of the MICOM Aeroballistics Analysis functional area provided the technical coordination..

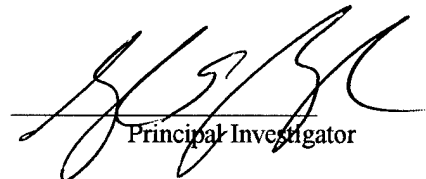
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Principal Investigator

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Introduction

This contract with the U.S. Army Aviation & Missile Command and the Research Institute of the University of Alabama in Huntsville covered the specific items and engineering services which are presented in the scope of work section of this report.

The UAH reference number for this work is Account number 5-20528 and is entitled Javelin Simulation Lethality Development. The period of performance was 2/26/99 to 9/30/99.

Scope of Work

The following items are listed in the scope of work for this task order contract with the U.S. Army Missile Command.

1. Provide statistical analysis of the DFS.
2. Support Live Fire Test Program.
3. Support LITE fielding
4. Investigate other methodologies.

Results

The results of this work that are unclassified will be covered in this document. The classified results have been delivered to the customer and stored on branch classified computers and Army safes.

IRPK

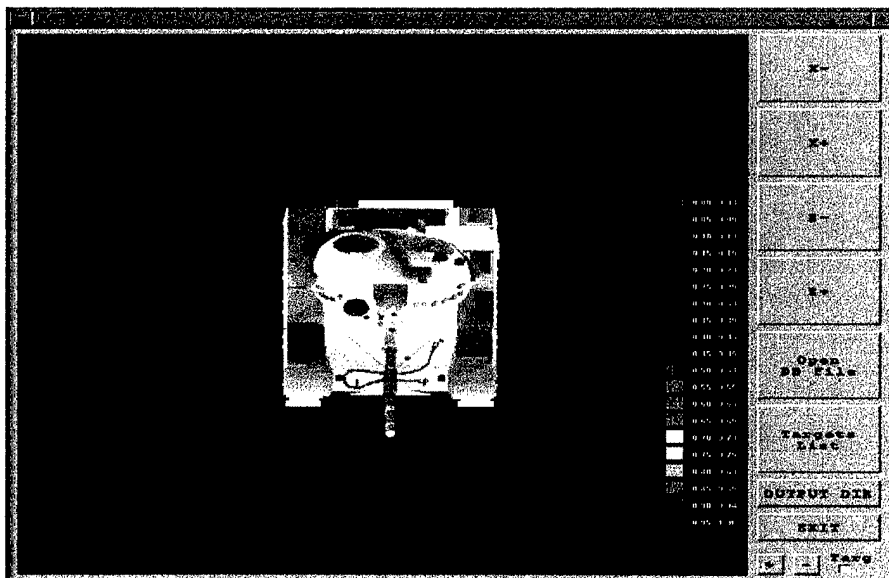


Figure 1 A Sample National Image with several impact points

This tool allows for the merging of sensor data which can be rendered with simulation data. This can be very valuable for analyzing any time dependent effects that could cause overall lethality to decrease at the moment of impact but be above requirements for the main part of the terminal approach. Figure 1 shows a sample type plot showing random color simulation impacts overlayed on a sensor image.

Covered Targets

This tool was developed to explore the ability of targets to hide under low hanging structures and the geometrical features which limit or enhance the ability of smart weapons to target and kill armor that may possess this type of obscuration.. The tool allows for the user to explore many variable and see the result. Indicators show the center of the turret ring and the center of presented area. Other variables can be set and this tool could take each impact point and compare penetration available with the Pk as labeled by lead agencies. Figure 2 shows one view of the tool.

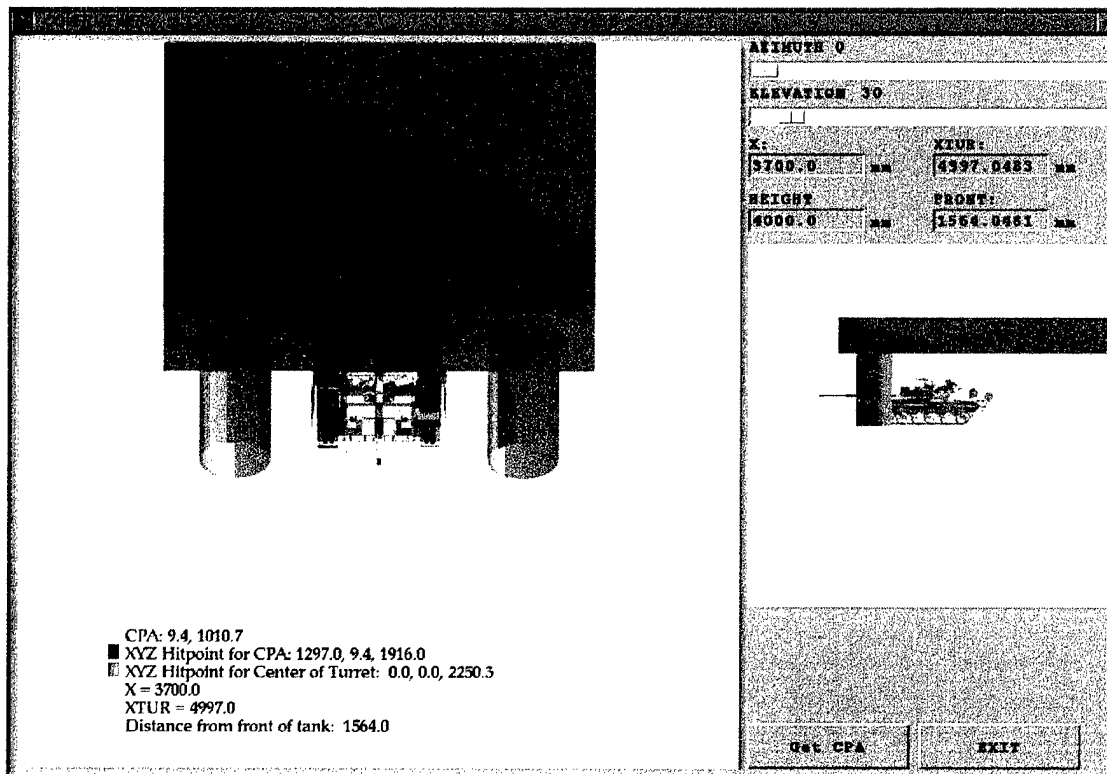


Figure 2 - The tool for exploring armor

Conclusions

This report documents the efforts under this task. All data is in the possession of the COTR for the respective tasks. A large amount of the analysis and the tools utilized to do this effort would be classified when associated with the project and any warhead specifics. However, the tools and the types of analysis tools presented here allow Project Office decision-makers to review and understand data calculated through official channels